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Notice of Allowability	Application No.	Applicant(s)	
	10/623,162	HAMA ET AL.	
	Examiner	Art Unit	
	Jenna-Leigh Befumo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to the amendment filed on January 6, 2006.
- 2. ☒ The allowed claim(s) is/are 1-81.
- 3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☒ Certified copies of the priority documents have been received in Application No. 09/655,073 .
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Amy Pulliam on March 3, 2006.

The application has been amended as follows:

Please amend the claims as follows:

1. A membrane casted material made of a segregating membrane and a segregating membrane supporting material in which the segregating membrane is casted on the segregating membrane supporting material, the membrane casted material comprising:

a segregating membrane including at least one member selected from the group consisting of polysulfone-based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and

a segregating membrane supporting material in which fibers are assembled in three-dimensions to form non-woven fabric, the non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material, and the non-woven fabric includes at least 10 weight % polyacrylonitrile-based synthetic fibers having a fiber length of 1mm-25mm and is processed by thermo-compression making a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

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~~wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric of the segregating membrane supporting material are selected to be dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane~~ the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane supporting material.

14. A method of manufacturing a ~~laminated~~ membrane casted material in which a segregating membrane is ~~laminated~~ casted on a segregating membrane supporting material material,

wherein fibers are assembled in three-dimensions to form non-woven fabric, and non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material,

~~the step comprising of~~ method comprising:

processing by thermo-compression of the non-woven fabric including at least 10 weight % polyacrylonitrile-based synthetic fibers having a fiber length of 1mm-25mm to make a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

~~manufacturing the segregating membrane supporting material wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric are dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane, and~~

~~laminating~~ casting the segregating membrane on the segregating membrane supporting material material,

wherein the segregating membrane includes at least one member selected from the group consisting of polysulfone based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and with the segregating membrane including at least a choice of polysulfone based, polyvinylidene fluoride based, polyamide-based, polyimide based, or polyacrylonitrile-based high polymer materials.

wherein the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane support material.

15. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric, including 10 weight % to 100 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

16. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric, including 20 weight % to 70 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

17. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric, including 30 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

18. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric,

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including 40 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

19. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is formed by using polyacrylonitrile-based synthetic fibers of size of diameter of 3.5 to 49.6 μm .

20. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric which is thermo-compressed to give a permeability of $0.5 \text{ cm}^3/\text{cm}^2/\text{sec}$ to $10 \text{ cm}^3/\text{cm}^2/\text{sec}$.

21. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made by using non-woven fabric including polyacrylonitrile-based synthetic fibers and binder fibers.

22. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 21 wherein the segregating membrane supporting material is made by using ~~a choice of~~ one member selected from the group consisting of polyester fibers, polyolefin fibers, nylon fibers, aramide fibers, ~~or~~ and polyphenylene sulfide fibers as binder fibers.

23. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 21 wherein the segregating membrane supporting material is made by using low melting point polyester fibers as binder fibers.

24. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 21 wherein the segregating membrane supporting material is made by using un-extended polyester fibers as binder fibers.

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25. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 21 wherein the segregating membrane supporting material includes 20 weight % to 90 weight % binder fibers.

26. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein thickness of the segregating membrane supporting material made from thermo-compressed non-woven fabric is 50 μm to 150 μm .

27. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 14 wherein the segregating membrane supporting material is made from non-woven fabric which is transported through and sandwiched between two rollers for thermo-compression processing.

28. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 27 wherein one of the two rollers for thermo-compression processing is a heating roller to make the segregating membrane supporting material.

29. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 27 wherein thermo-compression processing is by two heating rollers to make the segregating membrane supporting material.

30. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 27 wherein the segregating membrane supporting material is made from non-woven fabric which is thermo-compressed by heating roller with a surface temperature of 200°C to 250°C.

31. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 27 wherein non-woven fabric is transported via heating roller at a speed of 20 m/min to 100 m/min.

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32. A membrane casted material made of a segregating membrane and a segregating membrane supporting material in which the segregating membrane is casted on the segregating membrane supporting material, the membrane casted material comprising:

a segregating membrane including at least one member selected from the group consisting of polysulfone-based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and

a segregating membrane supporting material in which fibers are assembled in three-dimensions to form non-woven fabric, the non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material, and the non-woven fabric includes at least 10 weight % polyacrylonitrile-based synthetic fibers and low melting point polyester binder fibers and is processed by thermo-compression making a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

~~wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric of the segregating membrane supporting material are selected to be dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane~~ the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane supporting material.

42. A membrane casted material made of a segregating membrane and a segregating membrane supporting material in which the segregating membrane is casted on the segregating membrane supporting material, the membrane casted material comprising:

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a segregating membrane including at least one member selected from the group consisting of polysulfone-based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and

a segregating membrane supporting material in which fibers are assembled in three-dimensions to form non-woven fabric, the non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material, and the non-woven fabric includes at least 10 weight % polyacrylonitrile-based synthetic fibers and un-extended polyester binder fibers and is processed by thermo-compression making a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

~~wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric of the segregating membrane supporting material are selected to be dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane~~ the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane supporting material.

52. A method of manufacturing a ~~laminated~~ membrane casting material in which a segregating membrane is ~~laminated~~ casted on a segregating membrane supporting ~~material~~ material,

wherein fibers are assembled in three-dimensions to form non-woven fabric, and non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material,

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~~the step comprising of~~ method comprising:

processing by thermo-compression of the non-woven fabric including at least 10 weight % polyacrylonitrile-based synthetic fibers and low melting point polyester binder fibers to make a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

~~manufacturing the segregating membrane supporting material wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric are dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane, and~~

~~laminating~~ casting the segregating membrane on the segregating membrane supporting material ~~material~~, material,

wherein the segregating membrane includes at least one member selected from the group consisting of polysulfone based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and ~~with the segregating membrane including at least a choice of polysulfone based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, or polyacrylonitrile-based high polymer materials.~~

wherein the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane support material.

53. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made from non-woven fabric, including 10 weight % to 100 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

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54. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made from non-woven fabric, including 20 weight % to 70 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

55. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made from non-woven fabric, including 30 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

56. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made from non-woven fabric, including 40 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

57. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made by using polyacrylonitrile-based synthetic fibers having a fiber size of diameter of 3.5 to 49.6 μm .

58. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made by using polyacrylonitrile-based synthetic fibers having a fiber length of 1mm to 25mm.

59. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is thermo-compressed to give a permeability of $0.5 \text{ cm}^3/\text{cm}^2/\text{sec}$ to $10 \text{ cm}^3/\text{cm}^2/\text{sec}$.

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60. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 52 wherein the segregating membrane supporting material includes 20 weight % to 90 weight % binder fibers.

61. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 52 wherein thickness of the segregating membrane supporting material made from thermo-compressed non-woven fabric is 50 μm to 150 μm .

62. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 52 wherein the segregating membrane supporting material is made from non-woven fabric which is transported through and sandwiched between two rollers for thermo-compression processing.

63. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 62 wherein one of the two rollers for thermo-compression processing is a heating roller to make the segregating membrane supporting material.

64. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 62 wherein thermo-compression processing is by two heating rollers to make the segregating membrane supporting material.

65. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 62 wherein the segregating membrane supporting material is made from non-woven fabric which is thermo-compressed by heating roller with a surface temperature of 200°C to 250°C.

66. A method of manufacturing a ~~laminated~~-membrane casting material as recited in claim 62 wherein non-woven fabric is transported via heating roller at a speed of 20 m/min to 100 m/min.

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67. A method of manufacturing a ~~laminated~~ casting membrane material in which a segregating membrane is ~~laminated~~ casted on a segregating membrane supporting material material,

wherein fibers are assembled in three-dimensions to form non-woven fabric, and non-woven fabric is processed by thermo-compression to join together fibers, which make up the non-woven fabric in sheet form, making the segregating membrane supporting material,

~~the step comprising of~~ method comprising:

processing by thermo-compression of the non-woven fabric including at least 10 weight % polyacrylonitrile-based synthetic fibers and un-extended polyester binder fibers to make a segregating membrane supporting material with overall bulk density 40% to 75% of the density of the fibers which make up the non-woven fabric, and

~~manufacturing the segregating membrane supporting material wherein polyacrylonitrile-based synthetic fibers included in the non-woven fabric are dissoluble in amide-based solvents or in sulfoxide-based solvents as a mutual solvent for forming the segregating membrane, and~~

~~laminating~~ casting the segregating membrane on the segregating membrane supporting material material,

wherein the segregating membrane includes at least one member selected from the group consisting of polysulfone based, polyvinylidene fluoride-based, polyamide-based, polyimide-based, and polyacrylonitrile-based high polymer materials, and ~~with the segregating membrane including at least a choice of polysulfone-based, polyvinylidene fluoride-based, polyamide-based, polyimide based, or polyacrylonitrile-based high polymer materials.~~

wherein the segregating membrane is dissolved in a solvent during casting which also dissolves the support material to bind the segregating membrane and segregating membrane support material.

68. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made from non-woven fabric, including 10 weight % to 100 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

69. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made from non-woven fabric, including 20 weight % to 70 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

70. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made from non-woven fabric, including 30 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

71. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made from non-woven fabric, including 40 weight % to 60 weight % polyacrylonitrile-based synthetic fibers, which is thermo-compressed.

72. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made by using polyacrylonitrile-based synthetic fibers having a fiber size of diameter of 3.5 to 49.6 μm .

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73. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made by using polyacrylonitrile-based synthetic fibers having a fiber length of 1mm to 25mm.

74. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is thermo-compressed to give a permeability of $0.5 \text{ cm}^3/\text{cm}^2/\text{sec}$ to $10 \text{ cm}^3/\text{cm}^2/\text{sec}$.

75. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material includes 20 weight % to 90 weight % binder fibers.

76. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein thickness of the segregating membrane supporting material made from thermo-compressed non-woven fabric is $50 \mu\text{m}$ to $150 \mu\text{m}$.

77. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 67 wherein the segregating membrane supporting material is made from non-woven fabric which is transported through and sandwiched between two rollers for thermo-compression processing.

78. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 77 wherein one of the two rollers for thermo-compression processing is a heating roller to make the segregating membrane supporting material.

79. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 77 wherein thermo-compression processing is by two heating rollers to make the segregating membrane supporting material.

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80. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 77 wherein the segregating membrane supporting material is made from non-woven fabric which is thermo-compressed by heating roller with a surface temperature of 200°C to 250°C.

81. A method of manufacturing a ~~laminated~~ membrane casting material as recited in claim 77 wherein non-woven fabric is transported via heating roller at a speed of 20 m/min to 100 m/min.

2. The following is an examiner's statement of reasons for allowance:

3. The Amendment submitted on January 6, 2006, has been entered. Claims 1 – 13 and 32 – 51 have been amended. Therefore, the pending claims are 1 – 81.

4. The 35 USC 103 rejections based on Morweiser et al. (5,470,485) is withdrawn since Morweiser et al. fails to teach using the nonwoven fabric as a support layer for a casted segregating membrane. The art rejection taught a composite with two nonwoven fabric layers comprising PAN fibers. Thus, the rejection does not have the structure now claimed.

5. The prior art fails to teach or fairly suggest producing a segregating membrane by casting a segregating membrane onto a segregating membrane support material comprising a nonwoven fabric having PAN fibers formed by thermo-compression; wherein the solvent used to dissolve the membrane layer also dissolves the support material, binding the two layers together upon removal of the solvent. By casting the membrane onto a support material which is also dissolved by the casting solvent, the casted composite material produces a unique finished structure which has an improved adhesion strength, as argued by the applicant (response, pages 19 – 20).

Further, while it is known to cast membrane layers onto nonwoven fabrics, the prior art fails to

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teach or suggest that the nonwoven support layer is also dissolved by the casting solvent or that it would be desirably to use a nonwoven fabric which is dissolved by the solvent.

6. Claims 1 – 13 and 32 – 51 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claims 14 – 31 and 52 – 81, as amended above, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement as set forth in the Office action mailed on June 30, 2005 is hereby withdrawn. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claims including all the limitations of an allowable product claim or rejoined process claim are presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

7. Thus, claims 1 – 81 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jenna-Leigh Befumo
March 5, 2006